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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/903,394	07/11/2001	Ramaswamy Murari	DEL-023	9467

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EXAMINER

WATKINS III, WILLIAM P

ART UNIT	PAPER NUMBER
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1772

7

DATE MAILED: 07/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

A27

Office Action Summary

Applicati n No.

09/903,394

Applicant(s)

MURARI ET AL.

Examiner

William P. Watkins III

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 May 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-15 and 22 is/are allowed.
- 6) ☒ Claim(s) 1-8, 16-21 and 23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. Claims 1-8, 16-21 and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Use of "film-like flexibility" is indefinite as the specification only states on page 4, lines 22-28 that the film may be flexible. There is no indication in the specification or the claims how the scope of "film-like flexibility" differs from the metes and bounds of a flexible film. The language "flexible film" would be definite.

2. The anticipation rejection over DiStefano et al., in section 2 of the first office action, is withdrawn as the reference teaches that the interposer layer is dimensionally stable (col. 11, line 30), which is contrary to the instant claim language which requires the film to be flexible.

3. The obviousness rejection using Chrai et al., in section 5 of the first office action, is withdrawn regarding claims 23, 8, 20, 21, 19, 2, 3, 4, 5, 9-15 and 22. The examiner agrees with

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applicant's argument that the chuck structure (elements A22, A23) shown in Figure 15 of the reference is a support for substrate layer A40, which actually receives the particles, and is equivalent to element 4 of Figure 1, which forms part of the final particle package. Thus the reference does not teach particles being deposited in the selected regions defined by the holes in the dielectric layer as instantly claimed in claims for which the rejection is withdrawn. Nor does it teach a dielectric layer that is appropriate for human consumption as required by instant claim 19.

4. Claims 9-15 and 22 are allowed. As noted for the reasons given in the above section, the art rejection using Chrai et al is withdrawn.

5. Claim 8 would be allowable, for the reasons given above regarding the art rejection, if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

6. Claims 23, 20-21, 19, 2-5 would be allowable, for the reasons given above regarding the art rejection, if rewritten to

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overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1, 6, 7 and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Zohni (U.S. 6,380,060).

See Figure 2A, col. 3, lines 45-55. No particular weight is given to the electrostatic particle intended use as the instant claimed structure appears identical to that taught by the reference.

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9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zohni (U.S. 6,380,060 B1).

The reference teaches a flexible dielectric structure with a conductive polymer under or in through holes as noted above. The reference teaches that the holes and conductive pads of Figure 2 may be 4 to 14 mils in diameter (col. 5, lines 15-30). The instant invention claims a dielectric layer thickness of .5 to 10 mils. It would have been obvious to one of ordinary skill in the art to make the layer thickness of Zohni the same order of magnitude as the other described features of the reference.

11. Claims 1, 6, 7, 17, 18, and 16 rejected under 35 U.S.C. 103(a) as being unpatentable over Chrai et al. (U.S. 6,303,143 B1) in view of Zohni (U.S. 6,380,060 B1).

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Chrai et al. teaches in Figure 15, a dielectric layer with an electrode in an aperture and under an aperture, the layer being used as an electrostatic substrate support to deposit particles such as drugs and other substances (col. 7, lines 30-65). The dielectric layer may be flexible and 10 mils in thickness (col. 7, lines 47-50). The electrodes may be in a pattern (Figure 8). Zohni teaches the use of conductive polymers as electrodes in dielectric substrates (col. 3, lines 45-55). The instant invention claims a dielectric substrate for electrostatic deposition with polymer film electrodes in apertures and under apertures in dielectric films. It would have been obvious to one of ordinary skill in the art to use conductive films in the apertures of Chrai et al. in order to form electrodes because of the teachings of Zohni.

12. Applicant's arguments filed 08 May 2003 have been fully considered but they are not persuasive.

Regarding the rejection using Zohni, applicant argues that the disclosure of a flexible dielectric sheet, with via with conductive polymer at col. 3, lines 45-55 would not be considered as being the structure of Figure 2 of the reference. The examiner disagrees. Figure 2 is described at col. 5, lines

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15-20 as having a flexible dielectric layer. The examiner is of the opinion that one of ordinary skill in the art reading the reference would instantly comprehend that the structure of Figure 2 is made of the materials disclosed at col. 3, lines 45-55.

Regarding the rejection using Chrai et al. and Zohni applicant argues that there is no motivation to combine. Both references deal with the common problem of flexible dielectric layer with conductive portions. Substitution of materials taught to have equivalent functions in the references would have been obvious to one of ordinary skill in the art absent unexpected results.

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

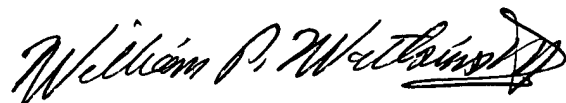
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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William P. Watkins III whose telephone number is 703-308-2420. The examiner works an increased flex time schedule, but can normally be reached Monday through Friday, 11:30 A.M. through 8:00 P.M. Eastern Time. The examiner returns all calls within one business day unless an extended absence is noted on his voice mail greeting.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 703-308-4251. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.

A handwritten signature in black ink, reading "William P. Watkins III". The signature is stylized with a large, looped "W" and a distinct "III" at the end.

WW/ww
July 26, 2003

WILLIAM P. WATKINS III
PRIMARY EXAMINER